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Crouching Impact, Hidden Attribution:

Overcoming Threats to Learning in Development Programs

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1.0 Introduction

Development agencies seeking to assess the outcomes of their programs face challenges which are inherent to the very nature of the development process. Outcomes often occur a long way downstream and may not take the form anticipated. Outcomes depend on responsiveness to context specific factors, creating diversity across initiatives. The value and sustainability of outcomes usually depend on the depth and breadth of involvement by many stakeholders. These characteristics make it difficult for external agencies: a) to identify and attribute specific outcomes to specific components of their programs; and b) to aggregate and compare results across initiatives. This paper outlines a methodology developed by the International Development Research Centre (IDRC) for use in assessing its support of applied research in developing countries. Entitled "Outcome Mapping", this methodology can be used to create planning, monitoring and evaluation mechanisms enabling organizations to document, learn from, and report on, their achievements. It is designed to assist in understanding an organization's results while recognizing that contributions by other actors are essential to achieving the kinds of sustainable, large scale improvements in human and ecological well-being towards which the organization is working. The innovations introduced in Outcome Mapping offer ways of overcoming some of the barriers to learning faced by evaluators. Attribution and measuring downstream results are dealt with through a more direct focus on transformations in the actions of the main actors. The methodology has also shown promise for across portfolio learning in that it facilitates standardization of indicators without losing the richness in each case's story.

2.0 Organizational Origins

The International Development Research Centre (IDRC) is a public corporation created by the Parliament of Canada in 1970 "...to initiate, encourage, support and conduct research into the problems of the developing regions of the world and into the means for applying and adapting knowledge to the economic and social advancement of those regions." Full text of the IDRC Act is available at http://www.idrc.ca/institution/eact.html.

While it operates independently of the government under the leadership of a 21-member international Board of Governors, IDRC remains accountable to the Parliament of Canada and the Office of the Auditor General audits its operations annually. The core of IDRC's funding is a yearly grant from Parliament and provisions in the Act allow the Centre to enter into a variety of joint-ventures and consortia. Currently, IDRC manages the funds and coordinates the implementation of more than 50 projects on behalf of, and in collaboration with, private, bilateral, and multilateral organisations such as CIDA, USAID, SIDA, UNDP, WHO, UNICEF, the World Bank, and the Asian Development Bank.

The Centre hires staff from around the world, basing them in Ottawa and in regional offices located in Cairo, Dakar, Nairobi, New Delhi, Montevideo, and Singapore. It employs multi-disciplinary teams of scientists, technicians, managers, and policymakers with broad experience in the physical, social, life,

and information sciences and is capable of administering large international projects. In its endeavours, IDRC supports and draws upon diverse networks of development thinkers and researchers, scientists, and policymakers world-wide and is unhampered by "tied aid" issues in choosing its partners.

Over thirty years, the Centre has provided more than $2 billion in support of over 5,000 research projects in 100 countries involving more than 20,000 researchers and 1,000 institutions.

IDRC seeks to contribute to redressing the imbalances in global prosperity and access to knowledge by supporting and coordinating development research so as to optimise the creation, adaptation, and ownership of the knowledge that the people of developing countries judge to be of greatest relevance to their own prosperity, security, and equity. An important part of IDRC's approach consists of building up indigenous research and innovation skills, and the technical and management capacities of institutions, to solve current and future problems.

For the most part, the research supported by IDRC is aimed at producing social rather than technical innovations. Its programming is directed more towards the social policy instruments and conditions that are required to make technologies work for social, economic and environmental betterment. The core program areas include research on policies aimed at achieving greater social and economic equity; better management of natural resources and human/ecosystem interactions; and more equitable access to information and communication technologies.

Two characteristics of IDRC's programming make assessing and reporting on results particularly challenging. First, research tends to be well upstream in both space and time from the development results to which it contributes. The pathway linking research with people's well-being is often discontinuous and subject to a wide variety of influences. Second, IDRC seeks to assist others to pursue their own development research goals. Therefore, responsibility for achieving results depends ultimately on the actions of our partners as influenced by the contexts in which they work. In short, we work in open systems, furthering the research missions of others in activities which are a long way upstream from the actual changes to which the research is intended to contribute. Documenting and drawing understanding from experience in this context presents certain conceptual and methodological challenges. For one thing, the more you standardize data collection across cases, the less detailed and accurate a story you can obtain for each individual case. Conversely, the closer data collection stays to the specifics of each case, the more difficult it is to discover and synthesize lessons across cases.

Solutions are needed if IDRC and its partners are to improve their effectiveness, share their learning, and inform funding agencies about what they are achieving and learning. Part of the mandate of IDRC's Evaluation Unit is to work towards such solutions by developing evaluation tools and methods in collaboration with other organizations. The Outcome Mapping methodology is a direct response to these problems.

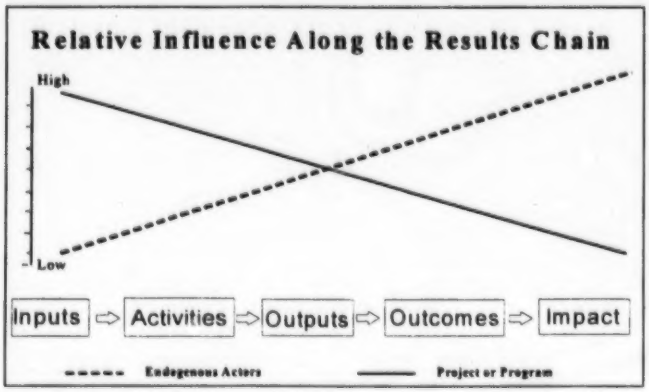
3.0 Crouching Impact, Hidden Attribution

As they are currently applied, the concepts of 'attribution' and 'impact' represent threats to learning from evaluations of development efforts. In light of shrinking international development aid dollars and the need optimize what is left, donors are increasingly basing funding decisions on their recipients' abilities to demonstrate 'impact'. In development terms, this typically means providing evidence that a particular project or program has brought about a sustainable, improvement in the environment or in the well-being of a large number of targeted beneficiaries. Methodologically, this requires isolating the key factors that caused the desired results and attributing them to particular agency or set of activities.

For development agencies, this would mean identifying and measuring the net, positive effects resulting directly from the activities they support. In the literature, there are few good examples where this has been done. IDRC has long struggled with this challenge in relation to development research - a struggle made more difficult by IDRC's style of program delivery as outlined above. Research results make their way to improving people's lives via long, busy, discontinuous pathways. Tracing the connections is at best unreliable and at worst impossible. This disconnect between important upstream contributions to downstream goals has been recognized in evaluation circles for a long time. In his 1967 book, Evaluative Research, Edward A. Suchman stated:

> The extent to which immediate and intermediate goals can be divorced from ultimate goals as valid in themselves poses a difficult question. Certainly there is a tremendous amount of activity, perhaps the largest portion of all public service work, devoted to the successful attainment of immediate and intermediate goals which appear to have only a very indirect bearing upon ultimate goals (Suchman, 1967, p.55)

For IDRC, an external donor seeking to empower its Southern recipients, and to conduct evaluations consistent with its style of program delivery, the attribution problem is even more perplexing due to the intended shift in relative influence over results as the project progresses. Using the simplified "results chain" model below illustrates the shifts in influence as events move along the "results chain" towards impact.



Typically, at the "inputs" end of the process, the externally supported project has most control over decisions and events - things such as project budget and design, choice of partners, location, timing, etc. At this stage, the local partners and beneficiaries have the least influence. However, once funding flows, activities start and local participants become increasingly active the balance of influence should begin to change. If the project progresses as intended, local actors become more committed and their roles become more prominent. For the outcomes of the project to be relevant and lead to long term, large scale, sustainable benefits - i.e. create impact - then local ownership and influence need to become effective and dominant. This model suggests that the more successful the project, the sooner, and the more, its influences disappear. Results move to the impact stage as project influence is supplanted by endogenous activities and institutions. Thus a paradox exists for external agencies under pressure to take credit for results at the "outcomes" and "impact" stages; for it is at these stages where their influence, if they have been successful, is low and decreasing relative to that of other actors. Attribution for results which naturally goes to the dominant influences associated with those results, may empirically overlook antecedent project components.

The solution to this conundrum offered by Outcome Mapping is to focus planning, monitoring and evaluation on targeted behaviors, actions and relationships within the project or program's sphere of influence, as well as on learning how to increase effectiveness in relation to the ultimate goals. A corresponding change in reporting requirements would be for donors to make their recipients accountable for demonstrating that they are progressing towards impact and improving in their effectiveness, not for the impact itself. In this shift to accountability for learning, the connection between the results of a program's activities and the desired impact becomes rational, not empirical. The intended "impact" of the program is its guiding light and directional beacon, not the yardstick against which it is measured. Thus the threat of failing to discover "hidden attribution" is eliminated when feedback on performance concentrates on improving rather than on proving, on understanding rather than on reporting, on creating knowledge rather than on taking credit.

Use of the term "impact" to describe the ideal results of development activities poses another threat to learning-oriented evaluation. There are variations in the way development impact is defined, but it is

generally thought of as being significant and lasting changes in the well-being of large numbers of intended beneficiaries. It is a subject of central interest and study among development agencies. In the mid 1980s, a study commissioned by the World Bank and the International Monetary Fund, asked the question *Does Aid Work*? (Cassen, 1986). Just over ten years later, the World Bank released the policy research report *Assessing Aid: What Works; What Doesn't and Why* (World Bank, 1998). Both studies sought to better understand what has and hasn't been accomplished through official development assistance programs of the last half-century. The OECD/DAC Evaluation Inventory contains 820 abstracts of evaluations of impact conducted by its members. It shows an increasing numbers of studies of impact being conducted of and by Northern NGOs. The book, *Outcomes and Impact: Evaluating Change in Social Development*, outlines the sources of pressure to demonstrate and assess development impact:

- *In a world of decreasing funds, growing dependence upon official donors and concerns about cost-effectiveness, there are enormous pressures to monitor performance more closely and to try to document the overall impact of development work undertaken. In effect, donors want to see tangible results from their support.*
- *The growing concern for "institutional learning", to know what works and what does not and to move forward as an organisation on the basis of a continuous and systematic understanding of the effect and impact of what the organisation has set out to achieve.*
- *An equal concern to ensure the 'sustainability' of programmes and projects, which can only really be assessed if there is a more complete understanding of the overall impact of the work. Sustainability implies a 'withdrawal strategy' on the part of the supporting agency and such a strategy can only be achieved if and when there is some authoritative understanding of the social development which has taken place and of its durability.*
- *The increasing recognition, particularly on the part of NGOs, of the need to be accountable to the programme or project target group and the growing understanding that information on impact can have a positive effect on motivation and self-confidence. (Oakley et al., 1998, p. 31)*

While the push to measure, demonstrate, and be accountable for development impact is most obvious within the donor community, it has made its way into recipient agencies and communities through requirements such as "logical framework analysis" or "Results-Based Management" for planning and reporting on their activities to donors. Consequently, the search for impact has become an accepted and dominant part of the development discourse. I would argue, however, that when donors and their recipients try to be accountable for achieving impact, they are severely limiting their potential for understanding how and why impact occurs. The drive to claim credit interferes with the creation of knowledge. As one colleague has expressed it, the singular focus on results yields "clueless feedback".

There are a number of ways in which the practices of donor agencies relating to impact contradict understanding of socially and environmentally sustainable development build up over 30 years of experience, research and evaluation.

3.1 Linear, cause and effect thinking contradicts the understanding of development as a complex process that occurs in open systems.

Pressure to demonstrate, measure, and be accountable for impact has led donors to conceptualize, implement and evaluate projects and programs using tools and methods which seek a linear cause and effect relationship between a problem and the identified 'solution' to that problem. However, experience tells us that development is a complex process which takes place in circumstances where a project or program cannot be isolated from the various actors (e.g. other donors, partner organizations, government departments, communities, organizations and groups within the community) with which it will interact. Nor can it be insulated from the factors (e.g. social, political, cultural, economic, historical, environmental) by which it will be influenced. While it is necessary to simplify to some extent in order to plan and implement projects, methodologically we need to acknowledge the contextual reality of which our projects are a part.

3.2 Bureaucratized programming contradicts the relationships, vision and values of socially sustainable development

Donor efforts to measure, demonstrate and be accountable for development impact have led to a reliance on logic-based approaches, requirements that a logical framework or results chain be prepared in the planning, management and evaluation of each project or program. The state to which this practice has evolved has fostered a bureaucratization in programming. The corresponding belief among managers seems to be that appropriately completed and updated planning and reporting documents greatly increase their influence over the achievement of results. While this may be true to a very small extent, experience is suggesting otherwise. Without strong partnerships and stakeholder involvement built on shared visions of development, the passion, values and commitment associated with those visions can easily be lost and with them opportunities for sustained change.

In his book *Impact Assessment for Development Agencies*, Chris Roche identifies a change in the way we conceptualize and plan for development in which "agreements and partnerships based on shared values have been replaced by bureaucratic trust based on plans, budgets, and accounts." (Roche, 1999, p.2) This emphasis on plans, budgets and accounts has implications for how partners are selected, the way in which relationships with these partners develop, the kind of programs that are initiated and implemented, the ways in which those programs are designed and executed, the type of management and reporting that is expected of program partners, etc. Overall, this shift in approach leads to a structuring of all development work through a paradigm or framework that seeks results. This often reduces the chance of taking risks, trying new approaches, developing innovative programs and working with new partner organizations, all of which are incompatible with systemic control but grow out of passion, commitment and a sense of mission.

3.3 Attribution of donor interventions contradicts the multiple endogenous contributions and conditions necessary for socially sustainable development.

Even though it is commonly understood that socially sustainable development occurs when a variety of actors and factors converge to allow local organizations to take ownership and responsibility for planning and implementing programming, donors feel it is necessary to be accountable for impact and to attribute changes that have occurred to their interventions. In seeking to demonstrate how our projects and programs have led to development impact, we do not examine or learn about how the contributions or involvement of others (including donors, recipients and other organizations, and project participants), and the environment in which those interventions occur, fit together to create development results.

In particular, our efforts to account for donor contributions to development impact ignore a key factor of socially sustainable development: the need for endogenous organizations and communities to have ownership of project and program components. Local ownership requires the devolution of planning, decision-making etc. from external actors to internal actors. Yet if we seek to demonstrate how our contribution led to development impact, we intentionally elevate our contributions above those of the other actors and factors that have played a part in developmental change.

3.4 The notion of project or program impact contradicts the ongoing confluence of initiatives and conditions that affect social and environmental well-being.

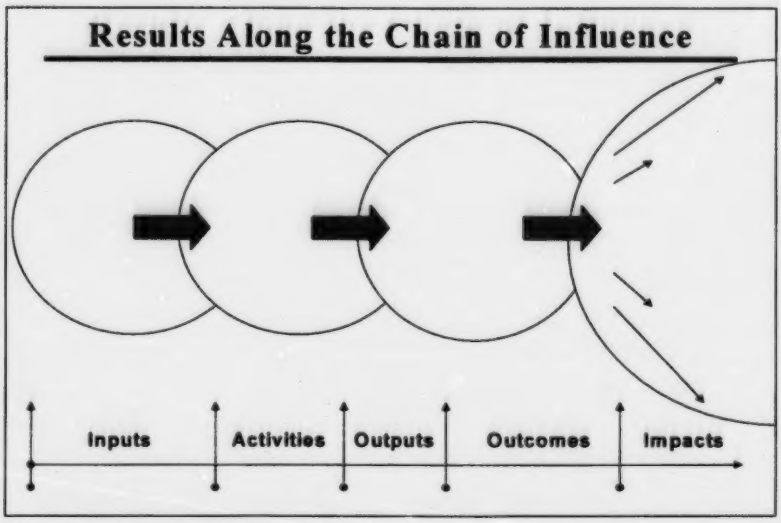
The search for impact leads donors to look for and expect results at the end of each project or program. The intention is often to alter plans for further funding or implementation based on whether or not results are being achieved at certain points within the funding cycle. While it is appropriate to look for development results, in many cases these may not occur until some time after the project is completed. The desire to show measurable or actionable results can shorten the vision of an initiative to aim at goals that are attainable, in the short term, with very low risk.

Even in cases where it is realistic to look for development impact at the end of a single initiative, the story does not end once "impact" arrives. We know from experience that, whether the desired results are achieved or not, change is a continuous process. Conditions will continue to be affected by combinations of social and natural events. The reality is that development does not occur in 1, 3 or 5-year periods with a clear beginning, middle and end. It is realistic therefore, to expect that individual projects will make a difference that is incremental and cumulative rather than singular and dramatic. It is also reasonable to expect that even once the desired outcome has been reached, it may erode due to subsequent influences either within or entirely independent of the project. Aware of this reality, many agencies seek to build endogenous capacity. which can maintain responses to ongoing changes.

This paper deals with the threat of crouching, yet unattainable, impact by proposing that we increase the value and attention placed on results upstream from impact; that we focus on the changes that are clearly within the sphere of influence of our programs. While at first glance, this appears to suggest concentrating on easier, less important short-term achievements, we have found it does the opposite. It

focuses attention on incremental, often subtle changes without which the large scale, more prominent, achievements in human well-being can not be attained nor sustained.

This suggests a modified view of the "results chain", seeing it more like a chain of influence in which donors strengthen recipients, recipients use their increased capacity to influence certain groups and institutions, and these in turn act in new ways within their spheres of influence. Influence radiates to changes in the area of concern for the donor and recipient, but beyond their direct influence. The following figure models this flow of influence.



Thinking in terms of a "chain of influence" opens the additional possibility of identifying behaviours or characteristics common to the actors at each link in the chain and thereby producing a framework for data collection and comparison across cases. This use is illustrated below in the model forest example where the performance of key stakeholders for five model forests in three countries was aggregated and compared.

IDRC's work in this direction has involved collaboration with Dr. Barry Kibel, of the Pacific Institute for Research and Evaluation. In 1998, we began, with Dr. Kibel's help, to adapt his "Outcome Engineering" approach for use by some of our development research partners. (Outcome Engineering was developed to help clients in the American social service sector meet their reporting needs while improving their performance.) We first field-tested this methodology with the West African Rural Foundation (Senegal), and with the Nagaland Environmental Protection and Economic Development Project (India). As Outcome Mapping took shape and became more robust, we applied it with the International Model Forest Network Secretariat (Canada) and in projects in East Africa, South Asia and Latin America.

Recently, we have become aware of parallels to our concern with documenting upstream progress and processes in the work of Everett M. Rogers in the mid 1990s on the diffusion of innovations (Rogers, 1995); in work going back to the 1970s, by Claude Bennett for the U.S. Department of Agriculture (Bennett, 2000); and in methods developed recently by Steve Montague with the Performance Measurement Network (Montague, 1998) . Each of these authors has developed a way to conceptualize, for practical purposes, the stages or processes which characterize the responses of the actors whose behaviour affects, or is affected by, efforts at innovation.

4.0 Outcome Mapping: Results as Behavioural Change

In developing Outcome Mapping, IDRC's Evaluation Unit has attempted to re-interpret the concept of results as it relates to development initiatives. We focus on one important, yet neglected, kind of result which we call (in the language of the logical framework) outcomes. We see **outcomes** as desired changes which indicate progress towards large scale development goals. These are goals towards which a project can contribute and which also depend on the contributions of other actors and may be influenced by unexpected and/or uncontrollable factors.

Our reason for viewing outcomes as changes in behaviour is to stress that development's primary concern is the way people behave toward each other and towards the environment. Changes in these behaviours are accomplished by and for the benefit of people. Although a program can influence the achievement of outcomes, it cannot control them because ultimate responsibility rests with the endogenous players and processes. With Outcome Mapping, programs identify the actors with whom they will work and then devise strategies to help equip these selected partners with the tools, techniques, and resources to contribute to the development process.

At the heart of Outcome Mapping is documenting contribution rather than attribution; seeking to understand the ways in which organizations contribute to change rather than trying to attribute change to a single organization or intervention. Outcomes are logically linked to a vision of long-term, sustained developmental change. However, Outcome Mapping intentionally limits planning, monitoring and evaluation of results to outcomes which are within the sphere of influence of an organization and to the strategies it uses to work towards achieving those outcomes. The long-term, downstream impacts, which single organization or initiative works towards but can never directly bring about, are held as clearly articulated reference points to guide action. But they are not the benchmark against which performance is measured.

While Outcome Mapping is not appropriate for all organizations or for the assessment of all development interventions, it does respond to the conceptual and methodological challenges highlighted above.

5.0 Outcome Mapping: The Three Stages

Outcome Mapping focuses on one particular category of results - outcomes - and one specific type of outcome: behavioural change. **Outcomes are defined as changes in behaviour, relationships, activities and/or actions of the people, groups, and organizations with whom a program works directly.** These changes can be logically linked to a program's activities although there is not usually a direct causal connection. These changes are aimed at contributing to specific aspects of human and ecological well-being by providing endogenous actors with tools, techniques, and resources to contribute to the development process.

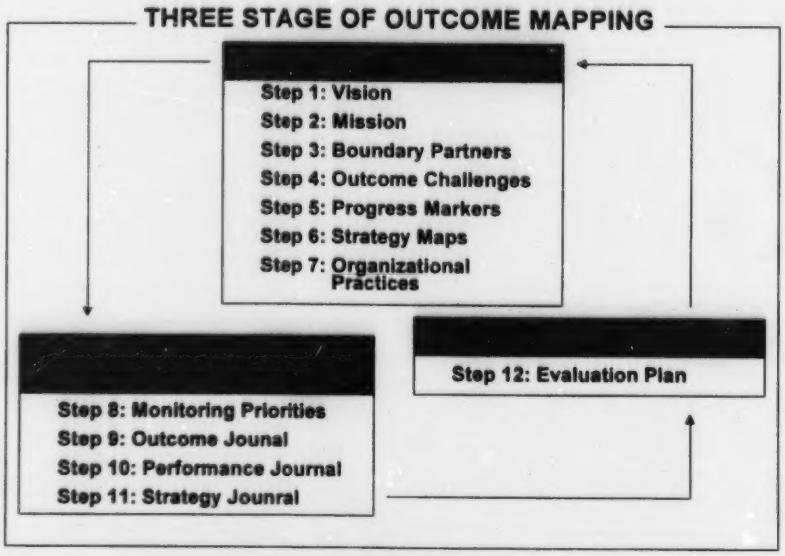
Overall, Outcome Mapping provides a program with a way to think holistically and strategically about how it intends to achieve its results, and the tools to construct and tell its performance story. By actively engaging program staff in the monitoring and evaluation process, it empowers them to articulate what they do to support outcomes and it can provide reliable data on the depth of change in their partners. In essence, it tries to implant the passion and enthusiasm of programming into the assessment process.

The Outcome Mapping methodology is divided into three stages. The first stage, **intentional design**, helps an initiative reach consensus on the macro level changes it would like to help bring about and plan strategies to provide that support. The intentional design stage helps answer four questions: 1) Why? (developing a vision statement); 2) Who? (identifying the primary partners); 3) What? (specifying desired outcomes and relevant progress markers); and, 4) How? (articulating the mission and a portfolio of strategies).

The second stage, **outcome and performance monitoring**, provides a framework for on-going monitoring of the initiative's actions in support of the outcomes and their partners' progress towards the achievement of outcomes. The program uses progress markers, a set of graduated indicators of behavioural change, identified in the intentional design stage to clarify directions with its primary partners and to monitor outcomes. It uses strategy maps and a list of organizational practices to create a framework for monitoring and reflecting on performance.

The third stage, **evaluation planning**, helps the initiative identity evaluation priorities, and develop an evaluation plan. Whereas the monitoring framework in stage 2 gathers information that is broad in coverage, the evaluations planned in this stage assess a strategy, issue, or relationship in greater depth. Outcome Mapping provides a method to frame, organize, and collect data, but it does not offer processes for analyzing the information. The initiative will still need to synthesize and interpret the data in order to make it useful. To maximize learning and improvement it may decide to share the results and its interpretations with others.

The following illustration shows the three stages and their component steps.



A detailed description of the entire process is accessible in the draft facilitation manual for Outcome Mapping available at < http://idrc.ca/evaluation > .

The heart of Outcome Mapping is captured in two key innovations: a) linking results measurement to the behaviour of the program's primary partners; and b) the use of progress markers for articulating the traceable logic of the intended changes. The approach has been enthusiastically received by IDRC's Southern partners, apparently because it enables them to tell their story in ways that realistically reflect the conditions and challenges they face. The following section draws on three cases where Outcome Mapping has been used: a two day monitoring workshop with the African Highlands Ecoregional Program (AHI); a self-assessment of the Nagaland Environmental Protection and Economic Development Project (NEPED); and an external assessment of the International Model Forest Network Secretariat (IMFNS). Rather than attempt to outline the entire methodology or the full process applied in each case, this paper focuses on aspects which illustrate a particular feature of this approach. Full

reports on these evaluations can be obtained at the website listed above. For a full explanation of the principles, concepts and processes of Outcome Mapping please consult the manual referenced above.

6.0 African Highlands Ecoregional Programme (AHI)

The African Highlands Ecoregional Programme (AHI) is a collaborative research and development program focusing on sustainable agricultural productivity including natural resources management (NRM) in the intensively cultivated highlands of Eastern and Central Africa. The program operates 8 benchmark sites in Kenya, Uganda, Tanzania, Madagascar and Ethiopia. Its mandate is to develop methods and approaches for: (I) developing and institutionalizing integrated solutions to (NRM) problems; (ii) strengthening multi-institutional involvement and partnerships, capacities and collaboration, (iii) improving the integration of biophysical and social science research; (iv) linking policy formulation to technology development; and implementing a practical system for assessing performance and learning from these process. In short, AHI has two main thrusts: to promote participatory research and development addressing biophysical, socioeconomic and policy issues related to NRM; and secondly, while doing so, to improve the strategies and methods for doing this. National research teams at each benchmark site work directly with farmers, extension agents and local NGOs , involving them in designing and carrying out farming system research trials.

The central idea in using eight benchmark sites in 5 countries was to enable inter-site learning. Sites were selected based on common criteria, (e.g. moderate elevation, high rainfall, high population density) to increase the potential for exchanges and comparisons among them. The research teams at each site were eager to share insights and experiences with other teams. However, even with this level of standardization in site selection, the teams themselves perceived great differences in the challenges and opportunities faced in their respective sites. Whatever similarities existed, the differences remained and additional design features were required to facilitate across site exchanges.

Toward the end of its second three year project phase, a team of 12 agricultural researchers in Western Kenya met for a two day workshop to develop and implement a monitoring and evaluation (M&E) process which would enable them to collect, analyse and use information to improve their work, increase the benefits flowing from it to the farmers, and share their learning with other sites. The researchers, mainly biological scientists, had been working for several years to involve farmers with them in carrying out multi-disciplinary research to develop agronomic and natural resource management practices aimed at increasing food production and enhance the sustainable productivity of the farmers' natural resource base.

Participating in their own M&E system had already been accepted by these researchers as part of their responsibility. They had been exposed in several workshops to traditional M&E concepts and methods, but as yet had been unable to implement any of them in their work. Although they clearly saw the need for documenting the strategies used, and the results attained, in encouraging farmer participation in the

applied research, they were still confused about how to proceed - and they were under increasing pressure to do so.

The monitoring and evaluation planning workshop was held at a field station and included a visit to several farmers' field in the area. With the principles and methods of Outcome Mapping in mind, but leaving aside its terminology and prescribed steps, the facilitators focussed workshop discussion on what the researchers were trying to achieve, and what role monitoring and evaluation could play in the process. The aim was to help the researchers clarify and prioritize their information needs and to develop a method for monitoring and evaluation which they could begin using immediately.

Discussion progressed through a series of questions. Once consensus on an answer to a question was reached, the participants moved on to the next. Below is a distillation of part of the workshop output, arranged in a question and answer format.

"What is there about this (interdisciplinary, participatory and inter-agency) kind of research that is different from other kinds of research you have done or are doing?"

Research team members agreed that, although their research focussed mainly on technology development, influencing human behaviour was new, "very important", and in fact essential, to the success of their work.

"Whose behaviour are you most concerned with in this type of research?"

Researchers quickly identified their own behaviour, that of farmers, and that of the organizations with which they partner to interact with the farmers (extension service, CBOs, NGOs) as their central concern.

"If the farmers were fulfilling their role fully and effectively as full partners in this research, what would they be doing?"

Researchers identifies the following as the most desired farmer behaviours:

- *Telling researchers, freely and frankly, their evaluation of technologies;*
- *Sharing with researchers, their criteria for accepting or rejecting technologies;*
- *Asking for help to venture on to the next stages (e.g. produce storage, processing &.marketing);*
- *Forming research committees to represent them in their work with researchers;*

- Sharing their learning and experience with local and neighboring farmers' groups.

The researchers felt they had succeeded in monitoring the biophysical characteristics and changes in the farmers' situations; but that they had not done well in monitoring farmer behaviour and social interactions among the farmers, and between the farmers and other players, including the researchers. They wanted to develop a tool to help them document and report on the above listed behaviours and actions.

"What is the main behavior of the farmers that you would like to influence and monitor?"

The researchers identified: "...giving researchers full and frank feed back on the technologies" as the behavior they wanted most to monitor.

"What are the farmers doing now with regard to giving you feedback?"

"Farmers are participating in the research in accordance with our guidance."

"If they were to totally transform their behavior so as to be giving you feedback consistent with the highest possible standards of participation, what would they be doing?"

"Farmers would be carrying out jointly planned trials, constantly feeding back their assessments of the results to the researchers."

"In order of increasing transformation, what would farmers who are moving to this ideal be doing?"

"They would:

- contact researchers frequently;

- continuously monitor and report on their trials;

- frequently raise problems and questions with researchers;

- keep complete records of trials;

- negotiate trial design and management with researchers; and

- promote the feedback process among other farmers."

Evidence to answer questions 1 to 8 below, represent the data that the researchers identified as useful for monitoring progress, or the lack of it, towards obtaining the desired participation of farmers.

1. How many farmers are participating in the research in accordance with our guidance?

2. How frequently are farmers contacting researchers?

3. How many farmers are continuously monitoring and reporting on their trials?

4. How often are farmers freely raising problems and questions with researchers?

5. How many farmers are keeping complete records of trials?

6. How many farmers have negotiated trial design and management with researchers?

7. How many farmers are promoting the feedback process among other farmers?

8. How many farmers are carrying out jointly planned trials and how often do they feed back assessments of the results to the researchers?

One researcher's outcome journal might look like this:

OUTCOME JOURNAL	
OUTCOME CHALLENGE: The program intends to see **farmers and farmers committees** which are fully engaged in the research process. They are participating in the design, management and monitoring of field trials; they regularly give researchers full and frank feed back on the technologies being tested, and they share their learning and experiences with extension agents and other farmers.	
EXPECT TO SEE FARMERS AND FARMERS' COMMITTEES:	
LMH (Percentage of farmers: Low = 0-40%, Medium = 41-80%, High = 81-100%)	
OOO	1. Participating in the research in accordance with researchers' guidance
OOO	2. Initiating contact with researchers
OOO	3. Continuously monitoring and reporting on their field trials
LIKE TO SEE FARMERS AND FARMERS' COMMITTEES:	
OOO	4. Frequently raising problems and questions with researchers
XOO	5. Keeping complete records on trials
OOO	6. Negotiating trial design and management with researchers
LOVE TO SEE FARMERS AND FARMERS' COMMITTEES:	

OOO	7. Promoting the feedback process among other farmers
OOO	8. Carrying out jointly planned trials and constantly feeding back assessments of the results to the researchers and to extension agents.

DESCRIPTION OF CHANGE :

Four of the eleven farms visited showed up to date records of crop growth and the applications of water and fertilizers.

CONTRIBUTING FACTORS & ACTORS:

Records were kept using record sheets provided during farmer training workshops in this area and irrigation and fertilization practices were consistent with the field trials planned jointly with farmers in this area.

SOURCE OF EVIDENCE:

Monitoring visit to field sites near Kakamega on January 23 & 24, 2001. See trip report dated: 31 January 2001.

PLANNED USE OF / RESPONSE TO THE ABOVE MONITORING INFORMATION:

Will invite one of the record-keeping farmers to attend and participate in next farmer training workshop in neighbouring village.

At the conclusion of the workshop, the researchers decided to try using a reporting journal based on the one above to collect monitoring data and to bring it their monthly meetings for discussion. The intention was to systematically capture this information in a special section of the minutes of their meetings for further aggregation and comparison on a quarterly and a yearly basis. The next step planned involves facilitators taking other research teams through the same workshop process, using this one as a model. It is expected that the progress markers for farmers at the other benchmark sites would be similar to those above, thus enabling the future aggregation and sharing of information among the research teams of all eight sites.

7.0 NEPED

The Nagaland Environmental Protection and Economic Development (NEPED) project was designed to improve the income and welfare of farmers in the Nagaland uplands of India, through improved agro-forestry practices and more sustainable resource management. The project aims to build the capacity of Nagamese researchers to work with village communities in developing options for the progressive intensification of land-based resource use and the application of sustainable technologies and resource management systems. The project works directly with villagers, providing financial incentives and technical assistance, and engaging in experimentation with farmers and relevant local and state organizations. The project began in 1994 with funding from the Canadian International Development Agency and the India-Canada Environmental Fund (ICEF) and was managed by the International Development Research Centre (IDRC).

In October 1999, in anticipation of a second phase, the project undertook a self-assessment based on Outcome Mapping in order to document what had happened in the project. The exercise was designed and largely completed during a three-day workshop involving about 15 project field staff. During the first day and a half, participants developed vision and mission statements, identified their "boundary partners" and specified the changes in activities, actions or relationships they had hoped to influence with the project. This provided them with a framework for the second half of the workshop which was devoted to collecting and organizing the data. Participants worked in groups, pooling their information, and then verifying and correcting it across groups. A list of required information not available at the workshop was compiled and individuals took responsibility for procuring it. Below are some examples of the targeted results and the data and ratings for each.

7.1 Outcome Challenge for Farmers

NEPED intends to see farmers, both male and female, with a better understanding of traditional agricultural systems, and improving their practice using improved land use methods. Mass replication of improvements is taking place along with improvements in agro-forestry techniques. Farmers are testing productive ideas and innovations. Women farmers are empowered and mobilized to participate in agro-forestry activities. Value-added activities on fallow land became a viable alternative.

Progress Marker 4	**Rating**	**Data**
Nurseries are developed	H (80% +)	Central nurseries in all district headquarters were initially developed to meet the growing demand for saplings.
COMMENTS: NEPED shifted to more sustainable approaches, including having women own and manage nurseries since there is short-term utilization of land and women can get direct economic benefit be selling the saplings. In addition to other nurseries, 80 women's nurseries have been developed throughout Nagaland.		
Progress Marker 6	**Rating**	**Data**
Increased utilization of well-adapted local varieties is seen	H (80% +)	Over 70% of test plots and 65 % of replicate plots contained "other" species, outside the top ten. With the exception of Teak, all species can be considered indigenous to Nagaland.

COMMENTS: Species planted were highly varied. Test plots contained a more varied number of species than did the replicate plots - about 35% of trees on test plots were not in the top 9 listed species, while about 20% of trees on replicate plots were not listed in the top 9 listed species. Farmers have become increasingly aware of the economic value of local species and have planted them. Due to intervention of NEPED, villagers become more aware of the utility of local varieties of tree species for timber use.		
Progress Marker 14	**Rating**	**Data**
Farmers motivate fellow farmers	M (26% - 79%)	Almost all replicators report that someone in their household planted trees after the NEPED test plot was established, and that they or someone in their household intends to plant trees in jhum fields in the next year.
COMMENTS: During farmer's training in the district, farmers shared their best practices with other participants. Evaluations found no significant difference between test and replicate plots. This implies that the village farmers watched and learned from the experiences of the test plot operators.		

The project team discussed the Outcome Mapping results in plenary. They identified weaknesses, gaps, and implications for the current and future phases. Here, for example, are the gaps and weaknesses related to the outcome challenge for local institutions.

7.2 Outcome Challenge for Local Institutions:

NEPED intends to see **local institutions** that are convinced about the relevance of the project concept, and thereby are motivated to incorporate tree plantation as an annual activity. Environmental awareness is increased resulting in biodiversity conservation. Through this, they start influencing local decision-making concerning the importance of planting trees in jhum fields. Some groups approach financial institutions for support to initiate their own programs independently.

Gaps and Weaknesses	NEPED I or NEPED II
Need to develop a formal information package on NEPED for use with local institutions	NEPED I
Begin to work with youth directly (e.g. youth groups)	NEPED I(e.g. make use of documentary on the project as an educational tool).

Government of Nagaland could build from NEPED approach and adopt in similar institutions	NEPED II
Extend the participatory team work approach of NEPED to the local institutions as a way to help strengthen them	NEPED II

7.3 Outcome Challenge for Local Government:

NEPED intends to see Village Development Boards (VDBs) and Village Councils (VCs) that are supporting effective implementation of NEPED at the local level, through Test Plot owner selection, resource mobilization and community participation. VDBs and VCs implement development activities and act as agents of change by applying funds and involving village residents and groups in a collaborative, transparent and equitable manner. As the central village decision bodies they will pass resolutions and influence the state government to act in the interests of villagers.

Progress Marker 3	**Rating**	**Data**
VCs / VDBs provide local resources, knowledge and actively participate	H (80% +)	**Local resources like land, labour, indigenous planting materials, local knowledge and participation were enthusiastically provided. POU members documented valuable information on indigenous tree species and methods of planting, traditional knowledge and customs etc.**
COMMENTS: The members of VCs/VDBs are generally village elders with knowledge, experience and authority in the village. Their contributions to the implementation of the NEPED project are substantial. The POU members worked closely with them in selection, rectification and monitoring of the village projects. Inadequacies were sorted out and resolved on the spot. Their participation activates the villagers and ensures proper emulation of the NEPED concept. Due to the active participation of local farmers, well versed with the local conditions of their village, the project used: tree varieties which can thrive in the soil condition of the village; plant propagation methods of local suitable varieties of tree species; and food crop - tree compatibility.		
Progress Marker 13	**Rating**	**Data**

VC / VDB pass resolutions / laws related to sustainable development	M (26% - 79%)	**The Chakesang Peoples' Organization (CPO) passed laws within their district banning the indiscriminate burning of jungles, wanton bio-prospecting and extraction of NTFP, hunting, etc. They have also passed resolutions upholding the need to conserve bio-diversity and maintaining the ecological balance. Resolutions are being enforced, with substantial fines imposed for non-acceptable activities.**

Overall, the participants felt that the success of the workshop signalled that the team had reached a significant level of maturity and noted as important the following results coming out of the self-assessment exercise.

- The project has had a significant impact on the Government of Nagaland as demonstrated by the project's involvement in a number of support activities, such as computerization of the State budget, and support in the establishment of a Core Group modeled on the inter-departmental project team approach. These activities and requests demonstrate the increased capacity and skill level of the project team members;
- The realization of the importance of fallow management when viewed from the perspective of all the different ways it has had an effect on the project cannot be discounted and the ability of the team to integrate this work reflects an increasing agility in project management;
- The team also realized by situating its work in a framework, that a great deal has been accomplished in the project;
- Further, the workshop has been an important step to systematizing the documentation;
- The team also reflected that there has been a much higher level of confidence to participate by members of the POU team than was evidenced in the early years of the project; and
- The POU members also noted that the arrival of a new Director in 1998 was for them a significant up-turn in project activities; many of the scores noted in the review were attained after his arrival.

8.0 International Model Forest Network Secretariat

The International Model Forest Network Secretariat (IMFNS) was established in 1995 to support the work of model forests around the globe. Its objective is to foster cooperation and collaboration in the management, conservation, and sustainable development of forest resources through a worldwide network of working model forests.

Specifically, the Secretariat:

- Encourages international cooperation and the exchange of ideas relating to sustainable forestry;

- Supports international cooperation in critical aspects of forest and social science that underlie the search for new models of forest management; and
- Supports ongoing international discussions on the criteria and principles of sustainable development.

The Secretariat serves as a channel for the introduction of new ideas and technologies, the use of scientific research results in improving the performance and output of model forests, and the planning and organization of workshops, seminars and discussions. Its

tasks include promotion, coordination, administration, fund-raising, technical advice and guidance, and public relations.

The Network now includes 21 model forests around the world, totalling over 12 million hectares. While each model forest may be small on its own, collectively they may well be a springboard to positively influencing the sustainable management of forests and natural resources on a global scale. Model forests are located in Canada, USA, Russia, Mexico, Japan, and in various developmental stages in Argentina, Australia, Chile, China, Costa Rica, Indonesia, Japan, Myanmar, the Philippines, and Thailand. The following is a brief description of each of the five model forests covered in the evaluation.

Chiloe Model Forest, Chile

Established in 1998, the Chiloe Model Forest covers 173,000 hectares in the middle of the Island of Chiloe, in the Southern coastal region of Chile. It is an ecologically important site, as the island constitutes a whole ecosystem and hosts species that are particular to that region. The Chiloe Model Forest encompasses private agricultural land, undeveloped stands of indigenous trees, and a national park. It was in late 1995 that the Chilean government, on the basis of significant degradation of its forested areas, first expressed interest in the model forest concept.

The model forest developed in Chiloe now receives support from a wide partnership base, including government and regional agencies, the Catholic Church, environmental NGOs, universities, community associations, indigenous groups, and private forest land owners. Two of the stated industrial development projects of the Chiloe Model Forest are the processing of logs harvested from the forest and the drying of the lumber resulting from that process. The overall objective of the program is to contribute to the preservation and sustainable use of the local forest ecosystem, thus ensuring conservation of its bio-diversity and environment in general, while improving the living conditions of rural families and indigenous communities.

Chihuahua Model Forest, Mexico

The 110,000-hectare Model Forest of Chihuahua is located in the west central part of the State of Chihuahua and is part of the temperate mountainous ecoregion that stretches across northern Mexico and the southern United States. The forest is made up primarily of a mixture of pine and

oak, with some Douglas fir, fir and madrone. Besides commercially productive forestlands, there are small-scale fishing and hunting activities. The state railroad runs through the model forest and has long played an important role in forest practices and tourism development.

The area's rural people are mostly Tarahumara Indians, while the Mestizos, whose traditional employment relates to forestry, live in the urban centers of San Juanito and Creel. The growing population has placed additional pressures on the forests and has led to their deterioration. In attempting to reduce human impact on the forests, the model forest aims to improve forest management techniques; conserve the biodiversity of the region; develop alternative opportunities and reduce pressure on the forests; and encourage cultural awareness of the environment through educational activities. To these ends, the model forest partnership includes members of the environment, government, industry and academic communities, as well as participants from the community at large.

Monarch Butterfly Model Forest, Mexico

The Monarch Butterfly Model Forest covers 795,000 hectares of land that bridges the states of Michoacan and Mexico. This region, one of the poorest in the country, is home to more than 900,000 people. Its forests also provide a refuge for millions of monarch butterflies each winter. Not only will the model forest help preserve one of the monarch butterfly's winter habitats, it will focus on organizing the surrounding communities to manage forest resources more effectively. Various activities will be undertaken with the goal of raising people's understanding of environmental processes and the importance of sustainable forest management.

These activities will encourage economic development while also supporting scientific research on the region's natural resources. New technologies will be tested with the goal of improving forestry and farming productivity, while helping to reduce negative environmental impacts and conserve biodiversity.

Calakmul Model Forest, Mexico

The 380,000-hectare Model Forest of Calakmul is located in the southeastern state of Campeche and is part of the largest remaining area of tropical rain forest in Mexico. The forest is primarily a mixture of high and low tropical rain forest. The topography is generally low and flat, with low mountains in the south bordering Guatemala. The area, which at one time was the heart of the ancient Mayan civilization, includes a number of archaeological sites.

Until recently, the primary source of economic activity in this model forest has been agriculture. Corn is the principal crop, but fruit, beans and squash are also grown. The challenge in managing the forest has been to balance agricultural needs with those of conservation, so that prime forestland does not suffer from being cleared for farming.

Model forest activities include an examination of alternative economic development opportunities and their potential impact on the environment and on local communities.

Other work includes expanded research into forest ecology, water quality and wildlife habitat and the expansion of silvicultural techniques. The goal of these programs is to ensure a healthy and productive integration of agricultural and forest production.

The Calakmul Model Forest will also be the focus for the collection and integrated analysis of information about communities, economic activities and the forest ecosystems of the area. Surveys and biological inventories will also be undertaken and environmental, social and economic data will be analyzed.

Gassinski Model Forest, Russia

The Gassinski Model Forest is situated in the boreal forest of Russia, and has a total area of 385,000 hectares. The region is characterized by hilly and mountainous regions, with lowlands and swamps adjacent to the floodplain of the Armur River. The predominant species found in the model forest are Yeddo spruce, Manchurian birch, and Korean pine. Pine nut production is an important economic activity, with over 55,000 hectares set aside for this purpose. Other forest areas are protected to safeguard valuable salmon breeding grounds. Forests for timber production cover 288,000 hectares and support six industrial forest harvesting and wood processing enterprises in the Nanaiskii District.

Other important economic activities in the model forest include agriculture, hunting and wildlife management, fishing, and harvesting of non-wood forest products such as honey, medicinal plants, fruits and berries, and natural resins and oils. Expansion of tourism and recreational opportunities are being pursued, while the model forest will work to ensure the preservation of the natural environment.

The native people living in the model forest area are called the Nanai. As their traditional economic base and way of life are dependent on the region's natural resources, any approach to sustainable management must ensure conservation of the natural forest ecosystem if the traditional economy of the Nanai is to survive.

The Gassinski Model Forest is an important scientific base for the development and testing of progressive forestry practices, environmentally sensitive technologies, and improved forest inventories. For example, inventory data has been collected and entered into a geographic information system (GIS) to produce a series of thematic maps on ecological risk assessment, soils, and rare and endangered flora and fauna.

The IMFNS, with support from IDRC's Evaluation Unit, set out in 1999 to document the experience and outcomes of the first phase (1995-1999) and to assess its performance in supporting the achievement of these outcomes. The assessment was intended to provide guidance for future model forest initiatives in diverse geographical settings and to provide information on the roles the Secretariat played and the interventions it had employed. In deciding to use the Outcome Mapping methodology IMFNS management and staff were clearly looking for a certain type of feedback. They did not want to be assessed against conventional benchmarks such as the number of trees planted or hectares protected. Instead they were interested in feedback on the relationships and activities and interactions they had stimulated among the various actors and between people and the environment.

Specifically, the study aimed at answering the following questions:

- Who has IMFNS reached? (Identification of IMFNS' boundary partners)
- How have the behaviour, relationships, activities, and/or actions of IMFNS' partners changed? (Identification of the level of achievement of outcomes IMFNS has encouraged in its boundary partners)
- What has been the nature of IMFNS' interactions with its partners? (Description of the strategies IMFNS has employed in order to encourage positive change in its boundary partners and an indication of how well these strategies have worked)

A total of 20 in-depth interviews were conducted with boundary partners in Russia, Mexico, and Chile in February and March 2000. Representatives of three Canadian model forests and two Japanese model forests were also interviewed, as well as the three key staff members of IMFNS and one former staff member.

The data were synthesized and plotted against the progress markers and discussed in a verification and interpretation workshop. In developing the progress markers for this study, the evaluation team found that they were so similar across all five model forests, it was possible to apply generic progress markers for each category of partner, regardless of location. The use of generic sets of markers enabled comparisons of progress across the model forest sites and greatly enriched the analysis. This aspect of the work will be of particular interest to evaluators looking for ways to contrast or synthesize experience across difference cases for learning purposes.

Overall, the study found that the IMFNS has played an important role in the successful establishment of all five model forests and in effecting change in the approaches and relationships of their local partners. The main interventions used to establish these international model forests included: capacity development, sustained and regular support to local partners, and network development. IMFNS activities resulted in the successful mobilization of , and a high level of achievement by, local partners in the development of these forests. The broad applicability of the model forest concept the value of collaboration across cultural boundaries.

The following two tables illustrate the use of generic progress markers for across site comparisons. The first table presents the desired outcomes and progress markers which IMFNS established for the behaviour of government officials and policy makers.

Outcome Challenge and Progress Markers for Government Officials & Policy Makers

IMFNS intends to see **government officials and policy makers** who are committed to the model forest concept and the principles of its partnership. They support the development of local capacity and consult non-traditional groups when planning and making decisions about forest resource management. They are actively involved in the model forest partnership and draw lessons from the experience that are relevant and can be used to inform national policy debates and policy formulation. They champion the model forest concept and seek funding from national and international sources to ensure the continuation and success of the model forest in their country/region.	
EXPECT TO SEE GOVERNMENT OFFICIALS & POLICY	
1	Designate a country representative for the national and international model forest program who will have clearly defined responsibilities (will be more than a mailbox)
2	Identify internal resources (human, financial) and, where feasible, external donors to support model forest program (develop a strategy)
3	Participate in regular model forest partnership meetings at the provincial/state level
4	Organize and/or participate in internal meetings and discussions on sustainable forest management at the ministry level
5	Create mechanism to support decision-making processes at the local level
LIKE TO SEE GOVERNMENT OFFICIALS & POLICY MAKERS	
6	Promote the program and concept as a viable mechanism to bring about change nationally to demonstrate their commitment to sustainable forest management
7	Disseminate results and share experiences (good and bad) internally and nationally (via workshops, conferences)
8	Facilitate and promote networking between national model forest sites and international sites (creating an enabling environment through which they can network)
9	Engage donors to financially support the model forest program (new and incremental) and earmark internal funds for the medium-term. Sources of funds are diversified beyond forestry or environment ministries (3-5 years)
10	Participate actively in the IMFN Steering Committee (e.g. attend meetings, engaging others outside the meetings, etc.)
11	Technical staff begin to share data with model forests and provide technical support (linking back to national program)
12	Willing to listen and establish fora to promote experimentation within their realm of influence with ideas raised by local/national partners
13	Expand number of model forest sites in the country
LOVE TO SEE GOVERNMENT OFFICIALS & POLICY MAKERS	
14	Promote and support the model forest concept in international forest policy fora (become advocates)
15	Incorporate model forest principles in national and regional policies and legislation
16	Take longer-term perspective (5+ years) in financial planning (invest incremental resources (internal and external) into model forests and IMFNS activities)
17	Collaborate with other relevant Ministries for planning and managing the land base/ integrated land use planning
18	Use consultation mechanisms with non-traditional groups before establishing policies on national resource management strategies (as well as on other themes)

Below, in the next table, the progress of each model forest against the above milestones was plotted

PROGRESS MARKER	CHILE – CHILOE	RUSSIA – GASSINSKI	MEXICO – CHIHUAHUA	MEXICO – CALAKMUL	MEXICO – MONARCH
Expect to see					
1	•	•	•	•	•
2	•	•	•	•	•
3	•	•	•	•	•
4	•	•	•	•	•
5	•	•	•	•	•
LIKE TO SEE					
6	•	•	•	•	•
7	•	•	•	•	•
8	•	•	•		•
9					
10			•		
11		•	•	•	•
12					
13	Potential				
LOVE TO SEE					
14		•			
15		•			
16					
17		•			
18		•			

It clearly emerges that, while all sites made significant progress, they had difficulty in local engagement of funding and people in model forest activities. This was because: donors have not been engaged to financially support the model forest programs; local funds have not been earmarked for the medium-term (5-10 years); funding sources have not been diversified beyond forestry and environment ministries; government officials and policy makers do not participate actively in the IMFN Steering Committee; and the broader participation of local groups is not being facilitated. This is strong evidence that, to build on the progress already made, additional building blocks need to be put in place to ensure continued progress and sustainability.

9.0 Summary and Conclusions

This paper has argued that evaluators can surmount the barriers to learning, presented by the notions of impact and attribution. The solutions are in assisting program to focus their monitoring and reporting on progressive changes in the actions and relationships of the development actors with whom they work directly, and to measure results that are clearly within the sphere of influence of their activities. Clearly articulated higher level, large scale development goals be used, not as standards for accountability, but to inspire ambitious action and commitment, and as a guiding beacon against which the logic and direction of events can be assessed. In each of the above cases, participants engaged in the process of identifying and agreeing on the changes to which they would contribute in light of their broader goals. With this approach, progress relevant to the local context can be gauged and better understood and shared. By documenting the sometimes small, upstream achievements, which lay the foundations for guiding and sustaining change, we can move towards a deeper understanding of the processes in which we are engaged. By giving those upstream achievements their legitimate recognition we can encourage fuller stories to emerge. By using techniques which allow comparison across cases, we can draw lessons and encourage learning at higher levels.

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